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NOTICE OF ALLOWANCE AND FEE(S) DUE

CAMPBELL STEPHENSON LLP 11401 CENTURY OAKS TERRACE BLDG. H, SUITE 250 AUSTIN, TX 78758 EXAMINER

REFAI, RAMSEY

ART UNIT PAPER NUMBER

3627

DATE MAILED: 09/12/2011

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,634	01/18/2002	Murali Bashyam	CIS0139US	8726

TITLE OF INVENTION: TCP PROXY CONNECTION MANAGEMENT IN A GIGABIT ENVIRONMENT

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0	\$0	\$1510	12/12/2011

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN <u>THREE MONTHS</u> FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. <u>THIS STATUTORY PERIOD CANNOT BE EXTENDED.</u> SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

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CAMPBELL STEPHENSON LLP 11401 CENTURY OAKS TERRACE BLDG. H, SUITE 250 AUSTIN, TX 78758				I her State addre trans	eby certify that this	s Fee(s	of Mailing or Transn 3) Transmittal is being ficient postage for first ISSUE FEE address (1) 273-2885, on the dat	nission deposited with the United class mail in an envelope above, or being facsimile e indicated below.
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								(Signature)
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APPLICATION NO.	FILING DATE		FIRST NAMED INVEN	TOR		ATTOI	RNEY DOCKET NO.	CONFIRMATION NO.
10/051,634	01/18/2002		Murali Bashyam				CIS0139US	8726
	I: TCP PROXY CONNE	CTION MANAGEMEN						
APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE D	UE	PREV. PAID ISSUE	FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$0		\$0		\$1510	12/12/2011
EXAM	EXAMINER ART UNIT CLASS-SI		CLASS-SUBCLASS	3				
REFAI, F	RAMSEY	3627	709-232000					
. Change of correspondence address or indication of "Fee Address" (37 :FR 1.363). Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.			(1) the names of u or agents OR, alter (2) the name of a sregistered attorney 2 registered patent	the names of up to 3 registered patent attorneys gents OR, alternatively, the name of a single firm (having as a member a stered attorney or agent) and the names of up to gistered patent attorneys or agents. If no name is a did, no name will be printed.				
PLEASE NOTE: Uni recordation as set fort (A) NAME OF ASSI	less an assignee is ident h in 37 CFR 3.11. Comp GNEE	oletion of this form is NO	data will appear on tt T a substitute for filing (B) RESIDENCE: (C	he pa g an a	tent. If an assigne assignment. and STATE OR Co	OUNT	RY)	cument has been filed for
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,634	01/18/2002	Murali Bashyam	CIS0139US	8726
33031 75	90 09/12/2011		EXAM	INER
	EPHENSON LLP	REFAI, RAMSEY		
11401 CENTURY	OAKS TERRACE			
BLDG. H, SUITE	250		ART UNIT	PAPER NUMBER
AUSTIN, TX 7875	8		3627	

DATE MAILED: 09/12/2011

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1197 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1197 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

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- 2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
- 3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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- 5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- 6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
- 9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

	Application No.	Applicant(s)
	10/051,634	BASHYAM ET AL.
Notice of Allowability	Examiner	Art Unit
	RAMSEY REFAI	3627
The MAILING DATE of this communication appear All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIOF of the Office or upon petition by the applicant. See 37 CFR 1.313	(OR REMAINS) CLOSED in this ap or other appropriate communication GHTS. This application is subject to	plication. If not included n will be mailed in due course. THIS
1. This communication is responsive to <u>Amendment filed 05/0</u>	<u>03/11</u> .	
2. \boxtimes The allowed claim(s) is/are $\underline{1-8,11-27,32-39,42-58,63-70,7}$	3-91,94-101 and 104-122.	
3. Acknowledgment is made of a claim for foreign priority unal All b) Some* c) None of the:		
1. Certified copies of the priority documents have		
2. Certified copies of the priority documents have		
Copies of the certified copies of the priority do	cuments have been received in this	national stage application from the
International Bureau (PCT Rule 17.2(a)).		
* Certified copies not received:		
Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONM THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.		complying with the requirements
4. A SUBSTITUTE OATH OR DECLARATION must be subm INFORMAL PATENT APPLICATION (PTO-152) which give		
5. CORRECTED DRAWINGS (as "replacement sheets") mus	et be submitted.	
(a) ☐ including changes required by the Notice of Draftspers	on's Patent Drawing Review (PTO-	948) attached
1) hereto or 2) to Paper No./Mail Date	= '	,
(b) including changes required by the attached Examiner's		Office action of
Paper No./Mail Date Identifying indicia such as the application number (see 37 CFR 1.		
each sheet. Replacement sheet(s) should be labeled as such in the		
 DEPOSIT OF and/or INFORMATION about the deposit attached Examiner's comment regarding REQUIREMENT 		
Attachment(s) 1. ☐ Notice of References Cited (PTO-892)	5. ☐ Notice of Informal F	Patant Application
<u> </u>		
2. Notice of Draftperson's Patent Drawing Review (PTO-948)	6. ☐ Interview Summary Paper No./Mail Da	te .
3. Information Disclosure Statements (PTO/SB/08),	7. 🛛 Examiner's Amendi	nent/Comment
Paper No./Mail Date 4. Examiner's Comment Regarding Requirement for Deposit	8. Examiner's Stateme	ent of Reasons for Allowance
of Biological Material	9.	
/Ramsey Refai/		
Primary Examiner, Art Unit 3627		

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Shawn Doman on July 13, 2011.

The application has been amended as follows:

Please amend the claims as follows:

Please **cancel** claims 30-31, 61-62, 92-93, and 123-124 and **amend** claims 1, 32, 63, and 94 as follows:

1. (Currently Amended) A method of managing network communication comprising:

establishing a first transmission control protocol ("TCP") connection with a first network element, wherein

said first TCP connection is between said first network element and a second network element,

said first TCP connection is intended to be established with a third network element, and

said first network element comprises a transmit buffer and a receive buffer; initiating a second TCP connection between said first network element and said third network element;

establishing communications between said second and said third network elements via said first network element;

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determining that said second network element requires additional data via said first TCP connection, wherein

said determining is performed by said first network element without said additional data being requested by said second network element, and

said determining comprises detecting that acknowledged data is being removed from said transmit buffer for said first TCP connection, wherein said detecting comprises detecting an acknowledgement sent via

said first TCP connection by said second network element, and removal of said acknowledged data frees space in said transmit buffer;

in response to said determining, pushing said additional data from said receive buffer for said second TCP connection to said transmit buffer; **and**

transferring said additional data from said transmit buffer to said second network element without said additional data being requested by said second network element.

element;

closing said first TCP connection with said client in response to receiving a

request for closing said connection from said data switching unit; and

performing a two-stage operation for releasing a control memory entry for said

connection;

wherein said control memory entry comprises a connection block entry and a flow control entry, and said two-stage operation comprises: releasing said connection block entry prior to receiving said request for closing said connection; and releasing said flow control entry in response to receiving said request for closing said connection.

32. (Currently Amended) A network device configured to:

establish a first transmission control protocol ("TCP") connection with a first network element, wherein said first TCP connection is between said first network element and a second network element.

said first TCP connection is intended to be established with a third network element, and said first network element comprises a transmit buffer and a receive buffer;

initiate a second TCP connection between said first network element and said third network element;

establish communications between said second and said third network elements via said first network element;

determine that said second network element requires additional data via said first TCP connection, wherein said determination is performed by said first network element without said additional data being requested by said second network element, and

said determination comprises a detection that acknowledged data is being removed from said transmit buffer for said first TCP connection, wherein said detection comprises detecting an acknowledgement sent via said first TCP connection by said second network element, and removal of said acknowledged data frees space in said transmit buffer; in response to said determination, push said additional data from said receive buffer for said second TCP connection to said transmit buffer; and transfer said additional data from said transmit buffer to said second network element without said additional data being requested by said second network element. element:

wherein said network device is further configured to close said first TCP connection with said client in response to receiving a request for closing said connection from said data switching unit;

request for closing said connection from said data switching unit wherein said

network device is further configured to perform a two-stage operation for releasing a

control memory entry for said connection, wherein said control memory entry comprises

a connection block entry and a flow control entry; and said two-stage operation

comprises:

releasing said connection block entry prior to receiving said request for closing said connection; and releasing said flow control entry in response to receiving said request for closing said connection.

63. (**Currently Amended**) A network device comprising:

means for establishing a first transmission control protocol ("TCP") connection with a first network element, wherein said first TCP connection is between said first network element and a second network element,

said first TCP connection is intended to be established with a third network element, and said first network elements comprises a transmit buffer and a receive buffer;

means for initiating a second TCP connection between said first network element and said third network element;

means for establishing communications between said second and said third network elements via said first network element;

means for determining that said second network element requires additional data via said first TCP connection, wherein said determining is performed by said means for determining without said additional data being requested by said second network element, and

said determining comprises detecting that acknowledged data is being removed from said transmit buffer for said first TCP connection, wherein said means for detecting comprises

means for detecting an acknowledgement sent via said first TCP connection by said second network element, and

removal of said acknowledged data frees space in said transmit buffer;

means for pushing said additional data from said receive buffer for said second TCP connection to said transmit buffer, in response to said determining; **and**

means for transferring said additional data from said transmit buffer to said second network element without said additional data being requested by said second network element.

element:

means for closing said first TCP connection with said client in response to receiving a request for closing said connection from said data switching unit if said request for data from said application is served; and

means for performing a two-stage operation for releasing a control memory entry

for said connection, wherein said control memory entry comprises a connection block

entry and a flow control entry and said two-stage operation comprises:

releasing said connection block entry prior to receiving said request for closing said connection and releasing said flow control entry in response to receiving said request for closing said connection.

94. (**Currently Amended**) A computer program product for managing network communication, encoded in computer readable media, said program product comprising a set of instructions executable on a computer system, said set of instructions configured to:

establish a first transmission control protocol ("TCP") connection with a first network element, wherein said first TCP connection is between said first network element and a second network element,

network element;

said first TCP connection is intended to be established with a third network element, and said first network element comprises a transmit buffer and a receive buffer; initiate a second TCP connection between said first network element and said third

establish communications between said second and said third network elements via said first network element;

determine that said second network element requires additional data via said first TCP connection, wherein said determining is performed by said first network element without said additional data being requested by said second network element, and

said determining comprises detect that acknowledged data is being removed from said transmit buffer for said first TCP connection, wherein detection that acknowledged data is being removed comprises detection of an acknowledgement sent via said first TCP connection by said second network element, and removal of said acknowledged data frees space in said transmit buffer;

in response to said determination, push said additional data from said receive buffer for said second TCP connection to said transmit buffer; and

transfer said additional data from said transmit buffer to said second network element without said additional data being requested by said second network element:

wherein said set of instructions is further configured to: if said request for data
from said application is served, close said first TCP connection with said client in
response to receiving a request for closing said connection from said data switching
unit; and

wherein said set of instructions is further configured to perform a two-stage operation for releasing a control memory entry for said connection, wherein said control

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memory entry comprises a connection block entry and a flow control entry, and said twostage operation comprises: releasing said connection block entry prior to receiving said
request for closing said connection; and releasing said flow control entry in response to
receiving said request for closing said connection.

After the amendments above, claims 1-8, 11-27, 32-39, 42-59, 63-70, 73-91, 94-101, and 104-122 are allowed.

Drawings

The drawings filed 1/18/02 are accepted by the Examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RAMSEY REFAI whose telephone number is (571)272-3975. The examiner can normally be reached on M-F 9:00 am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ryan Zeender can be reached on (571) 272-6790. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ramsey Refai July 17, 2011 /Ramsey Refai/ Primary Examiner, Art Unit 3627